

ART. VII. *Case of Monstrosity, in which the Brain, Heart, Lungs, Stomach, Liver, Spleen, Pancreas, and Right Kidney were wanting.* By J. S. B. JACKSON, M. D., of Boston. (Read before the Boston Society for Medical Improvement, July 10th, 1837.)

Mrs. B., æt. 20, married three years, and has one child now living. June 25th was confined prematurely, being then about seven or eight months pregnant; attended by Ward N. Boylston, student of Dr. Shattuck's, through whom the specimen was presented to the Society. One well-formed child had been expelled, when the subject of this case, presented by the feet, and was withdrawn. The labour, other-



wise was natural, and no cause could be assigned by the mother for the malformation. The case, without the dissection, was published by Mr. B. in the Boston Medical and Surgical Journal for July 19th, accompanied by a drawing on stone, which was made by Mr. James Colman, student of medicine, from which the accompanying wood-cut has been taken, and which renders a general description of the external appearances unnecessary. A very successful cast, in plaster, was also made by Dr. O. W. Holmes for the Cabinet of the Society.

June 30th, the *dissection* was commenced. The weight, then, was two pounds fourteen ounces, (avoir.) having lost about one pound since it was born. Cutis had a bright yellow colour in several places where the cuticle had been removed; but elsewhere it was natural and the whole appearance quite fresh. Length, in a straight line, ten and a quarter inches; greatest width, five inches; and circumference at the same part, fourteen inches. The protuberance on the median line, and in front of the thorax, it may be premised, represented the head, so that the specimen was not strictly acephalous, though it perhaps deserved the name as well as almost any case on record. This protuberance was two and a half inches from the vertex, fleshy to the feel; and, for the most part, covered by cutis; it had a neck smaller than the body, and there was some dark hair about it, which extended upwards about an inch and also down into the sulcus. It consisted of two portions; the upper was from four to five lines in diameter,

rounded, and had a slight sulcus on the anterior face; the lower portion was considerably smaller than the upper, with which it was, for the most part, connected; but terminating anteriorly in two points one above the other, and directed upwards. Upon the anterior face, and between the two portions were two small openings, one on each side, and leading into cavities, which will be described in another place. On the back nothing remarkable except an appearance somewhat resembling a small cicatrix, one and a half inches from the vertex.

The upper extremities consisted of a very imperfect hand growing directly from the sides of the trunk. The right, which was considerably the largest, had upon it two fingers, and looked not unlike the extremity of a lobster's claw. Length one and two-third inches; greatest width three-quarters of an inch; inner finger eight lines long, six broad at the base, and two at the tip; the outer one was four lines long, four broad at the base, and one at the tip. The left upper extremity, which is scarcely seen in the drawing, consisted of a single finger, of a rounded form, thirteen lines in length, from four to five transversely, and diminishing to two at the tip. All of the fingers, as also most of the toes, had a slight transverse fissure in the place of the nail. Both feet turned directly in, the dorsum being directed forwards. Each had four toes, which were, for the most part, short, rounded, and fleshy to the feel; on the right these were at equal distances; but on the left the first and second were far apart, as also the third and fourth. Otherwise the lower extremities were well formed.

Anus imperforate. Penis sufficiently well formed, the prepuce adhering to the glands as it does frequently, if not generally, in the *fœtus*; urethra pervious. Nipples very distinct.

Of the umbilical cord there remained two and three quarter inches, a considerable portion having been left with the placenta; it was very small and much shrivelled. At its junction with the abdomen there was a hernia of the intestines, covered only by a delicate membrane, and extending into it one inch; the same appearance was noticed during the last year in the case of another monstrosity.

Integuments excessively œdematous and constituted by far the greater part of the bulk of the *fœtus*; contained very little fat. On the back of the thorax and towards the sides there were several large cysts, lined by a delicate, smooth, and polished membrane, and filled with clear, yellowish serum; varied as to size and form, but the largest, situated just to the left of the spine, would probably have contained $\frac{3}{4}$ iiss.

Cavity of the abdomen was imperfect, but more capacious on the

right side than on the left. There were contained within it the small and large intestines, the left kidney, two renal capsules, testicles and bladder. The stomach, liver, pancreas, spleen and right kidney were wanting.

The greater part, if not the whole, of the small intestine and a considerable portion of the large were contained within the hernial sac. The convolutions of the small intestine adhered together at many points, and to the parietes of the abdomen; length eleven inches; diameter two to two and a half lines; terminated bluntly at the upper extremity in a cul de sac, and was nearly filled with a whitish, curdy substance. Large intestine eight inches long and about two lines in diameter. The upper part of the intestine contained a considerable quantity of white crumbling substance, having a peculiar, granular, and partly scaly appearance; the rectum was filled with transparent mucus with some traces of milky looking fluid. Cæcum well formed. The rectum terminated in the bladder just in front of the prostate gland by a very minute opening, though large enough to allow the bladder and the rectum to be inflated, either one from the other.

A perfectly similar communication was found in two other monstrous foetuses dissected during the last year, in each of which the anus was imperforate; also, in the case of two infants, born with imperforate anus, but otherwise well formed, one of whom was examined on the 8th of last March, and the other on the 16th, each of them having lived just a week. In each of these the rectum communicated with the bladder by a valvular opening just where it did in the present case. It would be interesting to determine what relation, if any, exists between this internal communication and imperforate anus, and whether the latter is ever found without the former or some malformation analogous to it. In a monstrosity which I dissected a few years since the rectum opened into the bladder, not where it did in the above cases, but high up on the left side. Several other cases might be quoted, if necessary, from surgical writers; yet, however frequent this communication may be, it is no less certain that many infants born with the anus imperforate are saved by an operation, the internal opening, if there be one, becoming obliterated as a new one is established.

Mesentery sufficiently well formed, but the omentum was wanting.

The kidney reposed upon the front of the spine, or a little to the left of it, and opposite the lowest ribs. Length eight lines; width four; pelvis and mamillary processes quite distinct; ureter half a line in diameter, and pervious throughout. Renal capsule very small and closely attached to the concave edge of the kidney.

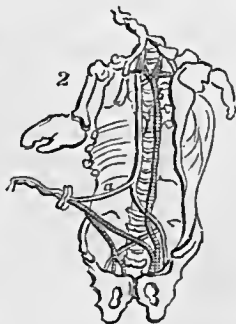
On the right side there is no trace of kidney or ureter, but just to the right of the spine and opposite to the left kidney there is a large renal capsule, of a somewhat pyriform shape, seven and a half lines long and four lines at the widest part.

The bladder was one inch long and well developed.

The testicles were situated just above the line of the pelvis; two and a half to three lines in length, and well formed. Vas deferens wanting on the right side; on the left it was traced very nearly to its termination in the urethra, but no vesicula seminalis could be found. Prostate gland well developed.

The heart was entirely wanting. The circulation, then, must have been carried on either by the vessels alone, which seems not impossible, or it was assisted, perhaps altogether maintained, by the heart of the other fœtus. The blood must have entered the monstrosity by the umbilical arteries, and been returned by the veins, the reverse of what usually happens, as the valves would have prevented it from reaching the capillaries of the extremities through the veins. These valves were unfortunately overlooked in the dissection, and their existence has been presumed, as they were found very distinctly in a mature fœtus which was recently examined for the purpose. If, then, the two placenta formed one continuous mass, another neglected point, and the umbilical arteries of the two cords communicated freely, there is no great difficulty in supposing that the heart of the well formed fœtus may have carried on the circulation of both.*

The umbilical vein (a) divided into two large branches, about half an inch from its entrance into the abdomen; one passed down along the spine, rather towards the left side, and divided at the usual place into the two iliacs, which again divided to supply the pelvis and lower extremities. The other branch passed upwards at some little distance to the right of the spine, and divided at the upper part of the thorax to form the right and left subclavian and jugular vessels. About the middle of the thorax it sent off a large branch, corresponding apparently



* December 2nd. Mr. Boylston has had the kindness to call at the house of his patient, where he saw the mother, she has frequently been with women during labour, and knows the appearance of a placenta; took charge of it in this case after her daughter was delivered, and observed that it was small and divided

to the vena ozygos, being directed towards the intercostal spaces, and to a mass which is found in the place of the right lung.

The branches of the aorta were generally smaller, thicker, and more opaque than those of the umbilical vein; the difference in structure being such as distinguishes the arteries from the veins. The two sets of vessels were proved to be entirely distinct by blowing air into each of them separately when the abdomen was first opened, it being found that neither could be inflated from the other. At the upper part of the thorax the aorta (*b*) divided into the right and left subclavian, from which were sent off two very small carotids. The main trunk descended in front of the spine, or a little towards the left side, and furnished the intercostals; within the abdomen it was found on the right of the umbilical vein; instead of bifurcating as usual, it was continued along the pelvis on the left side, and terminated in the umbilical, and in the external and internal iliac arteries; on the right side the iliacs formed their own umbilical, and were quite distinct from those on the left side, so far as could be ascertained, the vessels having been coarsely injected when the dissection was somewhat advanced. In the front part of the thorax, beneath where the sternum should be, there was quite a network of vessels.

The cavity of the thorax, on each side of the spine, was nearly filled by what may have been the rudimentary lungs. The texture, for the most part, was close and very nearly resembled condensed cellular membrane; along the spine were several large cells filled with serum, and suggesting the idea of the lungs of a turtle; no pleural cavity; on being cut through, they presented no appearance of vascularity, and certainly nothing which resembled the air-passages.

The protuberance upon the front of the thorax consisted mainly of integument, without any trace of brain. The openings before mentioned led to cavities, one on each side, and quite distinct; they were sufficiently large to admit a probe, extended backwards three-quarters of an inch, and terminated in a cul de sac; the inner surface was smooth and polished, except just within the openings, where it was thickened and rough. Taken in connexion with the bones about them, these cavities bore some resemblance to the nostrils. Within the lower point of the lower portion of the protuberance, was a cavity about one and a half lines in diameter, and having slightly attached

into two portions; this last circumstance was noticed, as she herself once had twins, when, as she remembers, the after-birth formed one continuous mass. This statement was freely and confidently made, and certainly seems to deserve some credit, notwithstanding the lapse of five months; if true, the circulation of the blood must have been carried on by the vessels alone.

within it the crowns of two incisor teeth, of a size proportioned to that of the fœtus; connected with one of them laterally was a third, but smaller than the two others.

The spinal marrow was fully exposed by separating two of the dorsal vertebræ; it was of the usual size, and nerves were seen going off from each side. It was still more satisfactorily shown at its upper extremity, the posterior laminæ of the three upper vertebræ being united by cellular membrane, so as to be easily separated; the spinal marrow there bulged slightly, and measured one-third of an inch transversely, then diminished and terminated in a blunt point; nerves were sent from it to form the axillary plexus, which was large on each side. The sciatic nerves were fully developed. Within the thorax and abdomen were found several ganglia of the sympathetic nerve with some of their small filaments. Could find no trace of par vagum or of the phrenic nerves.

Muscles of the trunk and lower extremities sufficiently developed; elsewhere imperfect.

The skeleton has been prepared and placed in the cabinet of the Society. There were nineteen vertebræ, besides the sacral; three situated above the first rib are partially united, and the bodies of two or three of the upper dorsal are irregularly ossified. Ribs, nine on the left side, and ten on the right; all well formed, except that those on the right side have hardly a trace of cartilage. Sternum consists of two lateral portions, not at all ossified, separated widely except at the lower extremity, where they closely approximate, but do not unite; the left portion is attached to the clavicle and to the cartilages of the ribs, the right to the clavicle only. There is a scapula on each side, sufficiently large, though not well formed, the right being the most perfect. The clavicles are short, broad, and stout, and bent to somewhat of an angular form. The right upper extremity wants the humerus, but there is a slender bone, about an inch long, which resembles the ulna, and attached to its upper extremity a cartilage, about two and a half lines in diameter, which may be the head of the radius; these last are attached by ligaments to the glenoid cavity: the carpus exists, but the distinct bones or rather cartilages were not evident; there are two metacarpal bones, about five lines in length, one is slender and attached to the long phalanx above; the other, broad and stout, bifurcated, and is connected with both the phalanges; the long phalanx measures nine lines and has three bones; the short one measures six and has two.

In the left upper extremity there are two very singular bones in a cartilaginous state which it would be difficult to name; the largest,

equal to three lines in diameter, is attached by condensed cellular membrane to the glenoid cavity and acromion process of the scapula; the second, one line in diameter, is attached to the first; then follows a well-formed metacarpal bone, five lines in length, and a phalanx eight lines long and having three bones. Pelvis and lower extremities well formed, except that the feet are turned in, have only four metacarpal bones and phalanges, and have one of the cuneiform bones misplaced, being set back behind the others. Connected with the upper extremity of the spinal column is a row of eight small bones, apparently the rudiments of a head, and terminating in the protuberance seen externally in front of the thorax; they are altogether one inch in extent, and for the most part exceedingly irregular; two nasal bones, however, can be made out, and a third, containing the teeth already mentioned, resembles a distinct bone which was once found in a foetus with hare-lip, and was supposed to be an intermaxillary.

Cases very nearly resembling the above, may be found in the *Mém. de l'Acad. des Sc.* for 1720, 1740, and 1703; and in the *Phil. Trans.* for 1767 and 1809. A complete summary, however, of what has generally been observed, may be found in the article *Monstrosity*, in the *Dict. des Sc. Med.* by Chaussier and Adelon, taken from a *Memoir* of Beclard's on *Acephalous Monsters*, and illustrated by a dissection of a well marked case from the original work.

ART. VIII. *Remarks on the Tuberculous Affections, with a Translation of the Instructions recently promulgated by the Academy of Medicine of France, relative to the study of Phthisis in different Climates, &c.* By W. W. GERHARD, M. D., Physician to the Philadelphia Hospital.

If there be any disease which, from its frequent occurrence and fatal termination, causes the despair both of physician and patient, that disease is the tuberculous affection. Whether we designate it as pulmonary phthisis, meningitis of children, chronic peritonitis, or scrofula, the radical disorder is the same, and presents similar anatomical characters. All the forms of disease, characterized under the term tuberculous, resemble each other in their anatomical lesions, which consist in the deposit of tuberculous matter. That is, a yellowish or grayish substance, without vessels, usually assuming a rounded form, but sometimes amorphous, or even deposited in the body of the tissues,